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The Critical Role of History in Scenario Thinking: Augmenting Causal Analysis within the Intuitive Logics Scenario Development Methodology

Abstract

The historian Eric Hobsbawm stated that ‘The safest empirical generalization about history is still that nobody heeds its obvious lessons much’. Whether at a macroeconomic level or within individual organisations there are numerous examples of this, such as the economic crash of 2008, the causes of which had many parallels with those that caused the great depression 80 years previously. On the other hand however, overly-relying on the past as a guide to the future has its own obvious dangers – not least that important future events may have no past precedent. As such, the present paper firstly provides a discussion of the advantages and disadvantages of using the past as a guide to the future. It then examines the role of history in scenario work, arguing that history should receive greater emphasis as part of the scenario planning process. We suggest changes to the standard Intuitive Logics (IL) approach to scenario planning which would render learning from history a more central component of the scenario process, in contrast to its current peripheral role. Rather than diminishing scenario planning’s ability to facilitate a consideration of how the future may differ from the past, we show how a greater emphasis on history can enhance consideration of the causality of future change. An adapted IL that has more emphasis on historical analysis can augment scenario planning’s effectiveness as a tool for consideration of the future.

Keywords: scenario planning; history; causation; learning

1 Introduction

A frequently quoted saying about history, attributed to the philosopher George Santayana, is that ‘those who cannot remember the past are condemned to repeat it’. Similarly, Mintzberg (2002, p76) states that ‘... if you want the imagination to see the future, then you better have the wisdom to appreciate the past. An obsession with the present - with what’s ‘hot’, and what’s ‘in’ - may be dazzling, but all that does is blind to the reality’. Building on this, Fawcett (2013) states that all of the issues and concerns we face today have ‘echoes and precedents’ throughout history, and as an example of the failure to learn from history, cites speculation bubbles such as the ‘tulipomania’ bubble (1634-1637) in Holland in which bulb prices exceeded the cost of a house in Amsterdam. As Fawcett (2013) shows, since then there have been many similar ‘bubbles’ including the South Sea Bubble (1716-1720), the British Railway Mania Bubble (1840s), the Stock Market crashes (1929 and 1987), the ‘Dot-com’ Bubble in the 1990s, and more recently, the Mortgage Securities Bubble in 2008. In all of these cases a central cause of the bubble was, in essence, avarice - exaggerated expectations of future growth and price appreciation - leading to excessive speculative risk-taking pushing up prices until the bubbles burst.

That bubbles continue to form and burst for the same or similar reasons over-and-over again illustrates our continued failure to learn from the past. We apparently have learnt nothing from history and this tendency to neglect the lessons of history is itself nothing new. One of the 20th century’s most eminent historians, Eric Hobsbawm (1999), commented some decades ago that ‘The safest empirical generalization about history is still that nobody heeds its obvious lessons much’ (p54). The problem presented by history, then, is not merely one of remembering it, but learning from it, and the two are not the same thing. Finkelstein (2006, p153), for example, states that while individuals who lead organizations are heavily influenced by history, they often ‘heed the wrong lessons from history’ (p169), and he provides examples from four different companies which were ‘constrained by history and key leaders each took lessons from that history that were wrong’ (p154).

However, what this overlooks is that an equal but opposite problem to not heeding lessons from the past is to pay too much attention to history. In the opening line of his novel ‘The Go-between’ L. P. Hartley (1953) reminds us that ‘The past is a foreign country, things are done differently there’. The past cannot be considered on the same terms as the present and, mirroring this, the future cannot simply be considered on the same terms as the present, or the past. *Similar* mistakes are made over-and-over, and *similar* problems and events occur again-and-again, but they tend not to play out in exactly the same fashion on each occasion. There are usually subtle but important differences and these render it dangerous to base one’s view of the future entirely on what has happened in the past. In addition to this, things can happen that have not happened before (Taleb, 2007). A consideration of the future based purely on the past can blind us to this possibility.

2 Objective of this paper

An important reason for carrying out the scenario work that is the subject of this paper, rather than simply employing projection-based forecasting as a means to consider the future, is exactly because we wish to understand how the future may be *different* from the past. Scenario planning, if it is to be an adequate tool for mitigating the uncertainty of the future, must be capable of resolving the tension between the two problems highlighted above: on the one hand to take sufficient account of how the present has come to be through history, and how future changes may be similar to those of the past; but, on the other hand, to avoid excessively drawing on the past to the exclusion of consideration of how the future may be different from the present and past from which it emerges. As such, this paper focuses on the use of history to aid causal analysis of the future. In a review of the literature, Wright et al. (2013) found that the three main objectives of the application of scenario methods are: i) *Enhancing understanding*: of the causal processes, connections and logical sequences underlying events — thus uncovering how a future state of the world may unfold; ii) *Challenging conventional thinking*: to reframe perceptions and change the mindsets of those within organizations; and iii) *Improving decision-making*: to inform strategy development.

The objective of this paper **then**, is firstly to provide a general discussion of the usefulness of history for consideration of the future. Secondly, this general discussion lays the foundations for the paper's subsequent focus on scenario planning as a specific technique for considering the future. We set out a means for addressing the aforementioned tension by adapting scenario planning to take better account of how the present has come to be as it is, so as to allow a better, more historically-informed, consideration of how the future may differ from the present and past. We recognize the paradox in wishing to understand better how the past has led to the present so that we can better understand how the future may *not* simply be a continuation of the past through to the present. We argue, however, that it very much makes sense to look to the past to understand how future changes may be different from, but similar to, those which have occurred before, and that balance is required to learn sufficiently from the past without allowing it to dominate our view of the future. We argue for a greater emphasis on history as 'orientation' (Hobsbawm, 1999) when engaging in scenario planning because, without firstly orientating ourselves with an examination of the present and how it has come to be, our consideration of the future becomes rudderless.

3 The usefulness of history for consideration of the future

3.1 The similarity between consideration of the future and examination of the past

Nasson (2004, p 1) defines history as '... the study of the past in order to understand the meaning and dynamics of the relationship between cause and effect in the overall development of human societies'. As reflected in this definition, the study of history, then, is about examining the historical forces which have shaped the past, assessing the multifaceted web of causes and their interactions that help explain why particular events and phenomena happened, and what elements of society persist despite change. Understanding the 'different time-scales, actors, periods, and events in their complex relationships with each other', and which cause long-term change, is, according to Guldi and Armitage (2014, p31), a primary role of the study of history. Guldi and Armitage (2014) suggest that historians 'learn how to argue about these changes by means of narrative, how to join explanation with understanding, how to combine the study of the particular, the specific, and the unique with the desire to find patterns, structures, and regularities' (p14).

Taken together, these views emphasize that the study of history is primarily concerned with causation and that different interpretations of causation are argued out by historians through the use of narrative. We return to this point subsequently when discussing the usefulness of history in relation to scenario planning, since the latter also places causation, as considered through narrative, at its heart, albeit with the obvious difference that this consideration is forward-looking rather than historic. Furthermore, the consideration of the future, whether through scenario planning or any other means, bears many other similarities to the consideration of the past. Hobsbawm (1999), writing on the subject of the usefulness of history as a means for considering the future, notes that we cannot ask the past for direct answers to any questions that have not already been put to it. We can, though, use our imagination to read indirect answers from what has been left behind from the past, including through 'counterfactual history'. The similarity here lies in the fact that, in the same way, we cannot ask the future for direct answers to any questions for the obvious reason that it has not happened yet.

The future is still trickier to query than the past because we cannot even base our consideration of it on what it has left behind. Brumbaugh (1966) states this problem as one of the changes in modalities which occurs as time unfolds, summing it up usefully with the phrase 'there are no past possibilities, and no future facts'. At least in

relation to the past we can examine the ‘facts’, even if these facts can be interpreted in multiple possible ways and, reflecting this, are disputed. These facts represent the answers to the direct questions that have been put to history, as Hobsbawm puts it, even if the answers are vague and imprecise. Our consideration of the future does not even have this to go on, except in that the future, we know, emerges from the past and present and, as we have noted, often contains many similarities and analogies with what has come before. Nevertheless, in sum, and as Hobsbawm (1999, p.57) goes on to suggest, the methods set out by historians for analyzing historical causes, consequences and alternative outcomes that could have but did not happen - albeit based as they are, on what would be, but never can be, the futurologists’ ultimate weapon of hindsight - are highly relevant to those who consider the future because of the similarity of the issues faced by those looking backwards and forwards. Among these similarities Hobsbawm cites the historian’s emphasis - not on the ‘all other things being equal’ which is a feature of econometric, projection-based forecasting - but on the very things that *did not* remain equal so as to cause the particular outcome that did occur rather than a continuation of what has come before. When considering the future, what we are particularly concerned with is what changes could occur which may affect us. This, like the study of the past, requires us to focus on what may *not* remain equal: the factors that may change so as to result in a different path of development into the future than would have been taken ‘all things being equal’. In this respect, the study of the past and the future are very similar.

3.2 Difficulties in using the past as a guide to the future

However, there are difficulties with basing a consideration of the future on the past. The first is the tendency for historians not so much to ‘discover’ the past as create it, developing narratives around individuals and events they consider significant, cherry-picking some events and evidence at the expense of others – or what Taleb (2007) has referred to as ‘the narrative fallacy’ of disciplines such as history. Any examination of the past inevitably involves making a tiny selection out of the infinity of things that have occurred and influences (causes) upon their occurrence (Hobsbawm, 1999, p.78). In other words, history is constructed, with the result that history can and is, written and interpreted in many ways. No matter how much evidence there is, there will always be room for different interpretations to justify different viewpoints, particularly for political reasons. Indeed, it may even be true to say that the greater the amount and variety of evidence, the more open the past is to alternative interpretations, since the more evidence there is, the more opportunity for selection to suit a particular viewpoint.

An example of this is the so-called ‘Armenian Genocide’, which is the subject of greatly conflicting interpretations. According to the Armenian perspective, the Ottoman Empire rulers set out in World War I to systematically exterminate Armenians living in the territory constituting the present-day Republic of Turkey. The Armenian view of events in 1915 presents it as a genocide perpetrated by Turks in which Armenians were slaughtered in orchestrated killings and forced into deportation. While Turkey does not deny the loss of many Armenians during the First World War, its position based on archived documents, is that genocide did not take place, as historical records show that a greater numbers of Turks were killed in the years leading to and during the war. The Ottoman Empire was on the verge of collapse, fighting for survival on various fronts, and in fact, some nationalistic Armenian groups joined forces with the invading Russian army and fought against the Turks. However, challenges to the Armenian narrative, even when based on historic documents and scholarly research, are dismissed as propaganda.

A second, related problem is that while the past is fixed and what happened cannot be changed, historians interpretations change over time because they are interpreting the past based on the general intellectual, moral, and cultural values of the society at the time in which they live - a characteristic often referred to as ‘zeitgeist’. As the values of society change, the historians’ depiction of the past changes too; thus the metrics and benchmarks used to assess change also change (Miller, 2006). The result is a multiplicity of interpretive discourses surrounding historical events. History often tells us more about the time *in* which it is written than the time *about* which it is written. This is best encapsulated by Durant and Durant (1968, p21) who suggest ‘that our knowledge of any past event is always incomplete, probably inaccurate, beclouded by ambivalent evidence and biased historians, and perhaps distorted by our own patriotic and religious partisanship ... even the historian who thinks to rise above partiality for his country, race, creed or class betrays his secret predilection in his choice of materials, and in the nuances of his adjectives’.

A third and increasing problem with using history to consider the future is the scale of ‘information overload’. What we are faced with today, suggests Godet (1987) ‘is a veritable pollution of the imagination though an information glut that is unnecessary – even misleading’ (p49). Edward Snowden for example, purportedly leaked as many as 200,000 classified U.S. documents to the media (Hosenball, 2013). However, the limited capacity of the human brain to synthesize, make sense of and reflect on the implications of the data overwhelms the abilities of individuals, and research reveals that ‘a surfeit of information’ results in cognitive information

overload, overburdening decision-making abilities, resulting in poor decisions (Begley, 2011). Hobsbawm (1999) notes that what we are faced with today is not a shortage of primary evidence about the past, but an excess of it. It should be constantly borne in mind that information does not stand up as an explanation on its own; information requires a weaving together, or the application of a theoretical standpoint, in order to stand, and this requires interpretation. By itself, additional information or evidence does not necessarily result in a better explanation. More information does not equate to more *knowledge*.

3.3 The value of history as a means for considering the future

The aforementioned difficulties associated with using the past to consider the future all have one thing in common. They each emphasize the considerable interpretation required for any examination of the past to occur. What one sees when one looks at the past very much depends on the lens through which one is looking, how it is tinted, who made it and for what purpose. This renders learning from the past a tricky and effortful task requiring attention to evidence, but also in some instances attention to the absence of evidence and the reasons for this, carried out with nuance and balance and combined with insights into human nature and motivations so as to make conjectures about action that was and was not taken, or causes that occurred or did not occur. There is also the requirement for sufficient imagination to consider what could have happened but did not, as this kind of counterfactual viewpoint can often provide vital insights into the role and importance of specific causes.

However, we argue that the aforementioned difficulties based on history's interpretivistic nature are actually the source of its usefulness for consideration of the future, rather than diminishing this usefulness. It is exactly because interpretation of the past differs according to the present in which it occurs, depending on who is doing the interpreting, and is dependent on which part of the 'evidence' is picked to be part of the story, that history is useful as a means of consideration of the future, if not in terms of any claims to 'truth' that historians may lay claim to (although few probably would). Varying interpretations, based on various selections and biases in evidence, tell us much about the viewpoints of those adopting them and their reasons for adopting them. The process of discussing and, where possible, agreeing a common understanding of the past, can tease out important insights into the reasons for varying expectations about the future. In sum, it is exactly because history is so open to interpretation that it provides a useful means to uncover different perspectives on the future. The highly interpretivistic nature of history enhances rather than diminishes its value to those considering the future, including those that employ scenario planning to do so.

3.4 History as orientation and as a search for causal clues

Reflecting this value, futures researchers are not necessarily averse to consideration of the past as a tool for thinking about the future. For example, van der Duin (2007, p11) states that 'Most futures researchers do not oppose history as a guide to the future because they often (wrongly) see the past as a source of information and knowledge that can serve the future'. He states that political leaders often turn to history to guide their decision making in the belief that history repeats itself, and the assumption that it is possible to learn from history. The most important motivation to learn from history he submits, is to avoid repeating the same mistakes that were made in the past. However, van der Duin (2007) contends that history is not a reliable predictor of the future and that, therefore, we cannot learn from it, going on to raise several points in defense of this.

Firstly, given the highly interpretivistic nature of history, leading to a tendency for revisionism, the question arises as to which version of history repeats itself. Secondly there is a contradiction in that if history does repeat itself and we do in fact learn from the mistakes of the past, then there would be no further repetitions of history. Support for this comes from Evans (2000) who states that history has repeatedly proved to be an unreliable predictor of future events. This, Evans (2000) suggests, is 'Because history never repeats itself; nothing in human society [...] ever happened twice under the same conditions or in exactly the same way' (p59). Popper (1957), meanwhile, when setting out his 'Poverty of historicism' argument, suggests that human futures are inherently unpredictable on the basis that how we act depends to some extent on the scientific knowledge available to us, and since we cannot predict future knowledge without it becoming present knowledge, we cannot predict what people will do.

We contend that the mistake made by van der Duin (2007) and others sceptical about the use of history as a means for considering the future is to consider it useful only if future changes exactly replicate those of the past. The key distinction here is evident in Evans' aforementioned suggestion that history has repeatedly proved to be an unreliable *predictor* of future events. History, if seen as a means of predicting the future, is indeed a poor guide. However, predictive power is not a useful means by which to gauge the usefulness of history – not least to scenario planning, which is explicitly *not* about prediction, as we shall come to shortly. We contend that it is

exactly because ‘nothing in human society...ever happened twice under the same conditions or in exactly the same way’ (Evans 2000, p59) that consideration of the past is important for consideration of the future. Its usefulness lies in using the past to orientate ourselves to the present, and to discuss how future changes may be similar to but different from those of the past. If the causes of significant past events and disjuncture points are disputed so much the better for teasing out alternative interpretations of the cause of potential future changes. Disagreements about past important changes are often mirrored by divergent views about significant potential future changes and what actions to take to create a future that is desirable. Disagreement about the past therefore contains much of use to consideration of the future.

Consideration of the past, and in particular, significant turning points in a focal system or organisation’s history, can provide the context and causal framework against which to compare, contrast and debate possible future changes. This is the orientating role of the past when it comes to consideration of the future.

However, when it comes to consideration of the future, there is an even more important role for history beyond one of orientation to the present. History provides clues as to what types of causes prevail in particular contexts; and history provides for this most of all when outcomes transpire differently from what was expected. By considering contemporary expectations as to what would transpire, and the reasons for these expectations and why they turned out to be wrong, we can garner crucial clues as to the reasons for surprise outcomes which can help us think about the future, even though we know that the surprises of the future will inevitably differ from the surprises of the past. Hobsbawm (1999, p.317) drawing on the 20th century German historian Reinhart Koselleck, notes that the fundamental experience common to all who live through history is error and surprise. The best causal explanations are, Hobsbawm (1999, p.317) quotes Koselleck as noting, formed by those whose predictions have been proven wrong in the past because they have the greatest need to explain why something other than what they expected occurred. They search for the causes of their surprise, generating important insights. Herein we begin to see how vital history is to scenario planning, which explicitly seeks to consider the potential causes of surprise futures.

4 Scenario planning

4.1 Why is scenario planning a useful means for considering the future?

The practice of scenario planning implicitly accepts that the further we look into the future, the more uncertainty increases as the potential sources of change across multiple dimensions grow, and therefore the longer term future cannot be forecasted with any degree of accuracy. In contrast to this, mechanistic, projection-based forecasting assumes that the long term is more predictable than the short term, since the latter is susceptible to short-term fluctuations which average out over the long term, rendering long-term trends less volatile and more predictable. The accuracy of such mechanistic, model-based approaches to the future relies on the assumption that the parameters dictating the relationship between the variables of which the model is comprised remain constant over time. However, even a very superficial knowledge of the history of empires, nations, innovations and industries challenges this idea and shows that the future, even over a period of just a few decades, is rarely a linear projection from the past.

Consequently the only way in which we can experiment with the future is to develop scenarios, in which a range of plausible futures are developed which bound the range of uncertainties that appear inherent in the future. The value of scenarios according to Wack (1985) is that they ‘can effectively organise a variety of seemingly unrelated economic, technological, competitive, political and societal information and translate it into a framework for judgment – in a way no model could do’ (p146). Hobsbawm (1999, p.58) confirms this, commenting that the margin of uncertainty about the future that exists in the present is so large that ‘we can only narrow it to a set of alternative scenarios’. History then, suggests that uncertainty can only be reduced not eliminated, in contrast to deterministic projection-based modelling which implies it can be eliminated altogether, or at least that it can be reduced to probabilistically-based risk, which is not at all the same thing (Knight, 1921; Shackle; 1955). Scenarios, then, are the historians’ recommended approach to dealing with the uncertainty of the future. Yet, history plays only a very peripheral role in scenario planning as it has come to be commonly implemented.

4.2 History as a theoretical underpinning for scenario planning

Scenario Planning has been around for more than 50 years and during this period a multitude of techniques and methodologies have developed, resulting in what has been described by Martelli (2001) as ‘methodological chaos’. The literature reveals an abundance of different and at times contradictory definitions, characteristics, principles and methodological ideas about scenarios. The consequence, according to Khakee (1991), is that ‘few

techniques in futures studies have given rise to so much confusion as scenarios' (p52). This 'confusion' results from the fact that there is a paucity of theory underpinning the use of scenarios as a means to consider the future, leading Chermack (2002) to conclude that 'the status of theory development in the area of scenario planning is dismal' (p25). This is equally true of futures studies in general, which Miller (2006) contends, lacks a coherent and commonly accepted foundation when compared to other well-established academic disciplines.

Godet (1990) notes that the absence of a theoretical underpinning for scenario planning is because the growth in popularity of scenarios has happened for practical reasons rather than theoretical ones, and as a result 'theoretical research and sophisticated tools have been neglected in favour of multiple applications' (p88). Confirmation of this comes, firstly, from Hodgkinson and Healy (2008, p437) who note that most of the scenario literature comprises 'retrospective accounts of practising advocates...[and] individuals with significant vested interests in the phenomena of study'; and secondly Tetlock (2005), who suggests that 'Scenario consultants should not, of course, be the final judges of their own effectiveness. When pressed for proof, the consultants have thus far offered only anecdotes, invariably self-promoting ones' (p191). This continues to be the case today.

While there are a plethora of articles on scenarios developed around countries, regions, industries and issues, historically it appears that there have been few individuals engaged in research to develop scenario method. But, recently, academic research has started to underpin improved practice. Research by Chermack and Nimmon (2008; 2013) for example, confirm claims in the literature that the overall scenario planning process does, firstly, have an effect on rational decision-making styles of participants; secondly that there is preliminary evidence that it does support intuitive decision making and the attributes of learning organisations. In terms of the effects of scenario planning on organisational performance, Phelps et al (2001) indicate that from their research there is evidence that 'scenario planning is a beneficial technique which can be used to improve performance across a range of industries facing changing, uncertain futures'. However, their findings are 'preliminary' as they are based on two small samples and 'because other potential causal effects have not been ruled out' (p231). Wright and Goodwin (2009), meanwhile, propose augmenting the scenario process to mitigate cognitive issues associated with the predictability of unique, high impact events, through a combination of "backwards logic" and crisis management - to enable 'the construction of an extended and more extreme range of scenarios' (p824). They (Goodwin and Wright, 2001) also advocate combining multi-attribute value modelling in the scenario process as a robust numerically-based means of evaluating alternative strategies, while Montibeller et al. (2006) extend this approach by proposing the multi-attribute evaluating options in terms of 'inter-scenario risk' and 'inter-scenario robustness'. All this demonstrates that academic research and method development to underpin the achievement of Wright et al.'s (2013) three main objectives of scenario interventions in organizations (see section 2, earlier) is beginning but is not, as yet, well-established.

As a consequence of the foregoing, the predominant view in the academic literature is that scenario planning is not yet based on a solid conceptual foundation; it does not yet have a sufficiently strong scientific basis to be regarded as an academic discipline. Scenario planning began not as a science but 'a practitioner's art'. Its origins are in the real world of management and it is more a craft than a science (van der Heijden, 1996, p113). In developing scenarios there is, of necessity, reliance on intuitive judgment rather than rigorous scientific models, given that, as we have noted earlier, there are no future 'facts' which can be studied, and, unlike conventional scientific research, futures research problems are 'usually ill-defined, imprecisely structured and probability relationships are largely unknown' (Athey, 1987).

We argue that by placing greater emphasis on history and using important past changes, especially those that came as a surprise to contemporaries, to consider possible future changes, and by fully acknowledging the interpretation that is required to achieve this and viewing it as a strength of the scenario process, scenario planning can overcome the commonplace criticism that it lacks a theoretical foundation. Such an approach would ally scenario planning to the more established discipline of history, would ensure that the process of scenario planning has empirical foundations (because it is partly based on an examination of past changes), and would mean it can be underpinned by philosophical approaches such as Critical Realism that recognize the interpretivistic nature of the social world, but also that there is an independently existing reality against which we can compare varying interpretations, leading to a socially-constructed viewpoint as to the orientation of the present, facilitating consideration of the future.

5 The use of history in scenario planning

While there are many different approaches to scenario construction, Postma and Liebl (2005) have shown the predominant approach to be that known as 'Intuitive Logics' (IL). In line with Ramirez and Wilkinson (2014),

IL is often referred to as the ‘standard’ approach to scenario planning. As recently outlined by Wright et al. (2013, p.634), this standard approach follows a sequence of eight stages, as summarised in Table 1. At stage 2, there is a decomposition of the scenario teams’ perceptions into the ‘forces’ expected to drive the unfolding of the future. Identification of these forces is initiated by asking the scenario team to consider a wide range of dimensions using as a template an acronym such as PESTEL (political, economic, social, technological, environmental, and legal) or the more wide-ranging STIRDEEPER (society, technology, industry, resources, demographics, economics, environment, political, energy and religion). The driving forces, often over 200 in number in a typical scenario exercise, are further decomposed into pre-determined elements and uncertainties, and are then re-composed into clusters of ‘related’ forces at Stage 3.

INSERT TABLE 1 ABOUT HERE

History, then, *is* incorporated in this process in that it involves the examination of predetermined elements as well as uncertainties. The historical aspect is evident in that Schwartz (1991, p111) indicates that predetermined elements stem from:

- slow changing phenomena: prime examples of this include demographics and development of infrastructure and resources;
- constrained situations: the example given being that the necessity for Japan with a large population but few resources, to maintain a positive trade balance;
- in the pipeline: the example here being what the teenage population of the US will be in the 1990s given that all of them have already been born; and
- inevitable conclusions: the example in this case being the gridlock in the US created by the refusal of the population to accept higher taxes while simultaneously unwilling to forego any public benefits.

We argue, however, that the incorporation of predetermined elements in this way does not take sufficient account of, and does not allow for sufficient learning from, history. While examination of driving forces which constitute the predetermined elements of change to some extent allows for the ‘orientation’ previously argued as a crucial role for history, it does not fulfil this role adequately, nor does it fulfil the broader role of history as a means to identify clues as to what types of cause prevail under different circumstances. Moreover, it does not allow for consideration of past surprises or, in relation to these, examination of why contemporary expectations turned out to be wrong – which the preceding discussion has shown to be a vital part of learning from history. In fact this earlier discussion highlighted that the usefulness of history stems often from its focus on the ‘things did not remain equal’, in contrast to the ‘all other things remaining equal’ assumption which underpins mechanistic forecasting techniques. The predetermined elements examined under IL, as described above, represent the latter rather than the former. They represent the causal aspects of the past, continuing through to the present and expected to continue into the future, that are expected to remain the same.

The examination of predetermined elements as part of IL, then, does not really take advantage of the benefits to be derived from history as set out previously. There is some account taken of history through the consideration of predetermined elements, but this focuses on what remains the same over time, rather than an examination of historical change and the reasons for it. Under IL as currently constituted, there is little consideration as to how the present state came about, even though the future is influenced by the drivers of change which resulted in the how the present state was arrived at. Templates such as PESTEL focus on what is salient at present, providing little room for consideration of how things have developed over time up to the present, how one identified driving force may have gained in prominence over time, or how past significant changes or surprises were the result of particular important driving forces. It does not take account of how causal factors were wrongly interpreted by contemporaries at the time at which surprise outcomes occurred in the past. A great deal of potential learning from how previous expectations were misguided is overlooked. It stands to reason, then, that scenario planning conducted in this way does little to assist in overcoming the repeated failure to learn from the past that was highlighted in the introduction to this paper. Below, we show how a broader accounting for history can be incorporated into an adapted IL process.

6 Incorporating historical lessons in the scenario development process

How should a broader learning from the past be incorporated into the scenario development process? The answer is that Stages 2 and 3 of the IL process require much more than simply having the scenario group ‘brainstorm’ driving forces - including those which are predetermined - and then intuitively clustering them. This is just a starting point in developing what are termed ‘first generation scenarios’ which provide a ‘better

and clearer articulated understanding of what one does and does not know about the system, and indicates questions that need to be researched' (van der Heijden, 2005, p121) - it is only the first step.

Having generated a list of initial ideas regarding driving forces in Stage 2, what is subsequently required is a second (and possibly more) iterations of Stage 2 in which the scenario team undertake in-depth research to determine what is known about the questions raised in the initial stages, what new questions need to be addressed and in what areas knowledge needs to be broadened out in order to understand the underlying patterns and structures of issues and how they have come about. This research can take a combination of forms including traditional desk-based literature searches and text mining, historical analysis, counterfactual analysis, Delphi techniques, discussions with experts in particular areas, interactions with so-called 'remarkable people' and conventional interviews using the 'seven questions' approach developed by the Institute of the Future and refined by Schwartz (1991) and van der Heijden (1996).

6.1 Historical Analysis

Based on the preceding discussion, which has shown the importance of history for consideration of the future, the 'historical analysis' should include in depth research which identify major turning points in the focal system's trajectory to the present through at least the recent past, and perhaps beyond. So, if the focal 'system' is a particular business which has chosen to consider its future through scenarios, the process by which the company has arrived in its current state should be traced through important past changes and investigations as to what caused these and how what occurred may have differed from what was expected to occur at the time, and why. 'Counterfactual analysis' can be employed to consider the company's present state had the expected outcome transpired, or another alternative outcome played out, thereby providing vital clues as to what types of cause may prevail in the system of interest.

Considerably greater attention to the historical process of transformation through which the company – or industry, or region, or macro economy, or whatever system is the focus – has come to be as it is provides both an agreed orientation as to the present state through which to consider future transformations and an in depth analysis of the types of causes which have prevailed under particular circumstances in the past. If the company's history, or the cause of important past transformations cannot be agreed so as to provide such a clear orientation to the present and clues as to past causes, in many respects, this is so much the better. This provides an opportunity to tease out key differences in stakeholder viewpoints with regards the company's current state, the need for change, and the reasons for potentially divergent expectations about the future. Simply bringing these out into the open and rendering them explicit can be a valuable contribution from engagement in a scenario exercise incorporating an initial in depth examination of the history of the focal system of interest. An important element of this early 'research' would therefore be to challenge the conventional wisdom – or senior management's standard view – as to the company's present state, to question the supposedly reliable data on which decisions are being made, and to scrutinize the prevailing discourse as to the company's basic nature as manifest in its historical development.

6.2 Expanding the role of research in the process

In many respects, this approach, incorporating a much more detailed initial stage, is, we believe, more in keeping with scenario planning as it was originally intended. While there has been an exponential rise in the literature on scenario planning (Hodgkinson et al. 2006; Ramirez et al, 2007; Varum and Melo, 2010), in reviewing a wide range of scenarios the observation of van Asselt et al (2010) is that most of the accounts of the process are relatively short descriptions of the main steps. Consequently 'choices, considerations, discussions, struggles, compromises, unproductive steps, flaws, practical adjustments, experiments, difficulties, challenges and local solutions are concealed' (van Asselt et al., 2010, p.11). In keeping with this, it is our contention that most of the accounts infer that the development process is a relatively straightforward and linear one; little attention is given to segregating out what is predetermined and what is uncertain, or to the role of history in understanding how the present situation has come about and how it may evolve in the future. Important causes of past significant changes and their potential to be repeated, albeit in a different context leading to subtle but important differences in the way they play out, are therefore overlooked. The scenario process has become, to some extent, a somewhat simplistic, off-the-shelf tool which allows management to 'tick the box' in terms of future proofing and consideration of the future. The simplistic way in which the IL process has been documented - with the good intention of widening access to scenario practice and invoking discussion - may have inadvertently contributed to this.

Therefore, in order to remedy this it is essential that in describing the scenario development process it should be emphasized that:

- the objective of Stage 2 and 3 is ultimately to understand the *causal structures* of elements and how they have evolved over time in order to then determine the predetermined and uncertainty elements of the future;
- this requires ‘retrospective analysis and thought’, and historical research of a wide range of variables to identify and map causal links to understand the history of system behaviours and to search for cues to causality;
- research in this context should take the form ‘iceberg analysis’ often used in systems thinking which entails digger deeper to move the thinking beyond current events which represent the visible 10% of the iceberg above the waterline, to discerning trends, patterns and recurrence of events; but this is insufficient, it is necessary to go further and dig below these in order to identify and understand the underlying systemic structures and relationships between the parts, and then below this to the baseline, to discern the worldviews in terms of the assumptions, beliefs and values which create and sustain the systems; and
- a variety of research methods discussed earlier should be used, not all of which will prove useful; to reach what Wack (1985, p141) termed the ‘Aha!’ moment, the point where there is clarity on what is predetermined and what is indeterminate, the scenario development process, in particular steps 2 and 3, is inevitably an iterative process.

In view of this, the suggestion is that Stages 2 and 3 of the development process should be expanded upon as summarized in Table 2 which now includes a ‘research’ phase in the process. While the role of research in the scenario development process is not given much prominence in the literature, it is a critical element of the process, support for which comes from Mietzner and Reger (2005, p236) who indicate that ‘it should not be overlooked that a deep understanding and knowledge of the field under investigation is absolutely necessary. Data and information from different sources have to be collected and interpreted which makes scenario building even more time-consuming’. We agree that it should not be overlooked, but argue that in many instances it is being overlooked and that this is reducing scenario planning’s ability to contribute to learning, including learning from the past. While this research stage is time consuming - van der Heijden (2005, p121) notes that ‘there is no limit to the amount of energy than can be invested in this research phase’ - the outcome of not devoting the time to undertaking the expanded tasks depicted in this table is that the scenarios developed will invariably be first generation scenarios. In other words, they will be somewhat basic and broad-brush and will overlook many aspects of the focal system under scrutiny that have proven crucial in the past and which therefore demand to be taken into consideration. While the initial stages of the process as currently commonly implemented may indeed uncover some obvious prederetermined elements, a limited research stage of this type will tend to produce an incomplete picture – especially in relation to causation - and will provide few insights beyond what was already known; consequently the resulting scenarios will be of limited value to decision makers as they will provide no basis for strategic action.

INSERT TABLE 2 ABOUT HERE

7 Conclusions

Because the future is uncertain it will never be possible to avoid making mistakes. Nevertheless, we owe it to ourselves at least to make new mistakes rather than repeat old ones. This requires learning from the past. We began this paper by noting that failure to learn from the past is common in many walks of life, not least in relation to the economy in which numerous bubbles have been inflated and burst with severe consequences over hundreds, perhaps even thousands, of years. That this continues right up to the present is testament to our continued failure to learn.

We have highlighted many advantages and some disadvantages to learning from the past. However, the disadvantages, we have contended, can be seen as advantages too. We have noted that the usefulness of the past for thinking about the future does not lay in predictive power, which it does not have. Rather, history’s value to consideration of the future lies in its ability to tease out conflicting viewpoints, misunderstandings and biases among stakeholders. It also lies in providing an orientation to the present and how it has come to be without which our consideration of the future and how it may be different is rudderless. Through scenarios we wish to consider how the future may be different and this implies ‘difference from’ something else, and that is the present and the past. Without a detailed understanding and orientation to these, we cannot possibly establish a

difference between the future and these. In other words, the past and present is at the very least needed to provide the contrast against which a different future is described.

Beyond this orientation role for history, the past can provide valuable clues as to the types of cause which prevail in different settings and circumstances. Granted, future causes may differ, or the same causes may play out in a somewhat different way, but to simply disregard the causes that have proven important in the past for these reasons seems at best wasteful and at worse hubristic. In acknowledging that the future does not exactly replicate the past we should not throw the baby out with the bathwater, to coin a common phrase. We can learn from the past even while acknowledging that it does not repeat itself in the same way every time similar events occur, and while also realizing that some of the most important occurrences of the future will be those which have no similar precedents in the past.

The importance of the vital early 'research' stages of the scenario planning process, in which history is examined, may have become diluted through commendable efforts to communicate the scenario process in a way that is accessible and easy to understand. The initial stages of the scenario process, we contend, should be viewed as those in which the greatest part of the effort is applied. The subsequent scenario building part of the process should, in essence, be relatively straightforward if these earlier stages have been adequately implemented. It is the earlier research stages, with an emphasis on orientating participants to the present and on uncovering important causes, which provide the context within which to think about the future and how it may differ from that present. We have argued that a central component of this is an in depth analysis of the past, with a particular focus on the evolution and development over time of the focal system of interest, whether it be a particular company, an industry, a local government service or a macro economy. We have suggested that the tendency for there to be multiple perspectives on the past renders history more useful, rather than less useful, as a means for considering the future. By examining, discussing and debating past changes, past 'surprise' outcomes, and why the expectations of contemporaries were not met in the past, we can garner vital clues that can assist us in considering how future changes may or may not play out, and how current expectations may fail to transpire leading to a surprise future. A key tension resolved through a successful, informative and useful scenario process is to balance learning from the past with consideration of how the future may differ from the past. We have argued that this requires a scenario process that places greater emphasis on learning from the past and we have outlined the adaptations to the currently most commonly used scenario process which can assist with this.

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Table 1: The Intuitive Logics Standard Approach to Scenario Development

Stage	Activity
Stage 1: Setting the scenario agenda	Defining the issue of concern and process, and setting the scenario timescale.
Stage 2: Determining the driving forces	Eliciting a multiplicity of wide-ranging forces.
Stage 3: Clustering the driving forces	Clustering causally related driving forces, testing and naming the clusters.
Stage 4 Defining the cluster outcomes	Defining two extreme, but plausible and hence possible, outcomes for each of the clusters over the scenario timescale.
Stage 5: Impact/uncertainty matrix	Ranking each of the clusters to determine the critical uncertainties i.e. those clusters which have both the most impact on the issue of concern and also the highest degree of uncertainty as to their resolution as outcomes.
Stage 6: Framing the scenarios	Selecting two initial critical uncertainties to create a scenario matrix, framing the scenarios by defining the extreme outcomes of the uncertainties.
Stage 7: Scoping the scenarios	Building a broad set of descriptors for each of the four scenarios.
Stage 8: Developing the scenarios	Developing scenario storylines, including key events, their chronological structure, and the 'who and why' of what happens.

Table 2: Stage 2 Expanded

Stage 2: Expanded	Activity	Questions	Output
Step 1: Initial brainstorming of driving forces.	‘Blue Sky’ thinking to elicit a multiplicity of wide-ranging forces.	<ul style="list-style-type: none"> • What do we see going on around us - what have we seen happening recently? • What events and trends have we see happening over time? 	Initial list of driving forces.
Step 2: Review of initial driving forces.	Discussion and questioning of knowledge around the initial driving forces.	<ul style="list-style-type: none"> • What do we know for sure • What do we not know and need to know more about? • What have we missed/not talked about? 	Research agenda.
Step 3: Research.	<ul style="list-style-type: none"> • Historical analysis • Eliciting perspectives from a diverse range of individuals - ‘experts’ and ‘remarkable people’ • Delphi techniques • Counterfactual analysis 	<p>What are the underlying structures which determine if a driving force is predetermined or uncertain?</p> <ul style="list-style-type: none"> • What has historically influenced the events and trends? • What are the historical relationships between the parts? • What are the factors which will change or keep the system(s) in place? • What are the assumptions, beliefs, and values at play? 	Deeper understanding of what is predetermined and why, and what is uncertain and why.
Step 4: Review of research findings.	Discussion and testing of knowledge around the revised driving forces.	Do we understand this; do we need further research in any particular area?	<ul style="list-style-type: none"> • If further research is not required, revise driving forces and proceed to Stage 3. • If further research required, undertake a third more focused research exercise.
Stage 3: Clustering the Driving Forces.	Clustering causally related driving forces, testing and naming the clusters.	<ul style="list-style-type: none"> • Are the clusters coherent; are the causal links logical and plausible? • Do we need some further research to examine the linkages and causality? 	<ul style="list-style-type: none"> • If further research is not required, proceed to Stage 4. • If further research required, undertake a fourth more focused research exercise.